

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-698 REV. E & INSTRUCTIONS FOR
CONTINUED AIRWORTHINESS ICA-D412-698 REV. 5

REF. TCCA STC SH92-43

REF. FAA STC SR01446NY

REF. EASA STC EASA.IM.R.S.00709

1.0 PURPOSE

The purpose of this service instruction is to add the D412-698-111/-112 Cabin Door Roller kits for installation on aircraft equipped with cargo door assembly P/N's 205-031-669-15 (LH) and 205-031-669-16 (RH). Customers who have purchased the D412-698-011/-012 kits can upgrade to D412-698-111/-112 using the DSI 9635-011/-012 kits as follows:

- DSI 9635-011 Roller Bracket Change Kit, LH: converts a D412-698-011 to a D412-698-111;
- DSI 9635-012 Roller Bracket Change Kit, RH: converts a D412-698-012 to a D412-698-112.

2.0 PARTS LISTS

Qty -011	Qty -012	Part Number	Description
X		DSI 9635-011	ROLLER BRACKET CHANGE KIT, LH (TO CONVERT A D412-698-011 KIT)
	X	DSI 9635-012	ROLLER BRACKET CHANGE KIT, RH (TO CONVERT A D412-698-012 KIT)
1	1	D4737-041	BRACKET ASSEMBLY
1		D4737-043	BRACKET ASSEMBLY
	1	D4737-044	BRACKET ASSEMBLY

Qty -111	Qty -112	Part Number	Description
X		D412-698-111	CABIN DOOR ROLLER KIT, LH
	X	D412-698-112	CABIN DOOR ROLLER KIT, RH
3	3	D3121-141	BRACKET ASSEMBLY
1		D3121-143	BRACKET ASSEMBLY
	1	D3121-144	BRACKET ASSEMBLY
9	9	D3199-1	BRACKET
1		D3202-1	COVER
1	1	D4737-041	BRACKET ASSEMBLY
1		D4737-043	BRACKET ASSEMBLY
	1	D4737-044	BRACKET ASSEMBLY

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AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: D. Shepherd (DE # 02)

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A	NEW ISSUE	MB	12.11.21
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DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9635	SHEET 1 OF 5
APPROVED		TITLE	SCALE
DE APPR.		ROLLER BRACKET CHANGE KIT	NTS
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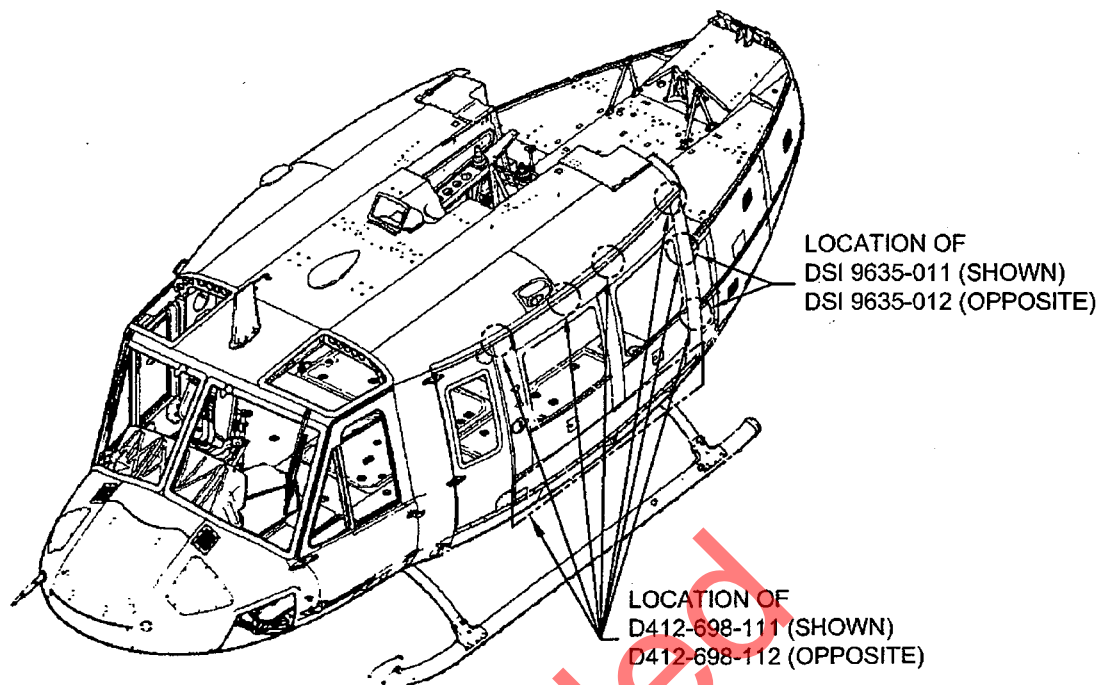


FIGURE 1 – INSTALLATION OVERVIEW

3.0 INSTALLATION

- 3.1 Remove LH and/or RH sliding doors (ref P/N 205-031-669-15/-16) from the aircraft per the Aircraft Maintenance Manual.
- 3.2 Remove 205-031-436-001 and replace with D3121-141 Bracket (3 places). Reuse existing hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-1 & D3238-11 as required. **Note** that the D3121-141 brackets contain one additional middle slot not used for this installation (see Figure 6 of IIN-D412-698 or Figure 52-8 of ICA-D412-698).
- 3.3 Remove 205-031-435-001/002 and replace with D3121-143 Bracket for left hand doors and D3121-144 Bracket for right hand doors. Reuse existing mounting hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-3 & D3238-13 as required. **Note** that the D3121-143/-144 brackets contain one additional middle slot not used for this installation (see Figure 6 of IIN-D412-698 or Figure 52-8 of ICA-D412-698).
- 3.4 Remove 205-031-433-1 Roller Support (LH) and 205-031-433-2 Roller Support (RH) and replace with D4737-043 on left hand doors and D4737-044 on right hand doors. Reuse existing mounting hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-5 & D3238-15 as required.
NOTE: The upper aft door track on early model aircraft may not have been modified to accept the extra roller on the D4737-043/-044 Brackets. If this track has not been modified, it should be modified in accordance with BHT TB 205-99-105 at this time.

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- 3.5 Remove 205-031-434-1 Roller Support and replace with D4737-041. Reuse existing mounting hardware and shims if determined to be airworthy. Alternatively, if using D412-698-021 Replacement Shim Kit, install D3238-5 & D3238-15 as required.
- 3.6 Remove 205-032-669-125 Track (LH) and/or 205-032-669-126 Track (RH) as applicable. Install D3199-1 Brackets and D3202-1 Cover as shown in Figure 2a using existing mounting hardware if determined to be airworthy.
- 3.7 Re-install LH and/or RH doors on the aircraft per the Aircraft Maintenance Manual. Check sliding operation of door. Adjust position/shimming of all new brackets until door operation is smooth and free of dragging/binding through full travel of the door. Once the door is sliding smoothly, torque all fasteners per Aircraft Maintenance Manual.
NOTE: To prevent roller wear and premature door track wear, ensure vertical rollers are sitting flush to door tracks.
- 3.8 **NOTE:** It is acceptable to install any portion of the D412-698-111/-112 kits in combination with the existing Bell door components. Replacement parts may be ordered individually as follows:

Bell Part Number	Location	Dart Replacement Part Number	Applicable Instruction
205-031-436-001	STA 162 in STA 140 in STA 116 in	D3121-141	3.2
205-031-435-001	STA 96 in	D3121-143	3.3
205-031-435-002	STA 96 in	D3121-144	3.3
205-031-433-1	STA 168 in	D4737-043	3.4
205-031-433-2	STA 168 in	D4737-044	3.4
205-031-434-1	STA 168 in	D4737-041	3.5

4.0 WEIGHT AND BALANCE

INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D412-698-111 Cabin Door	0.82 lb	-48.0 in	-39.4 in lb	130 in	106.6 in lb
Roller Kits (net)	0.37 kg	-1.22 m	-0.45 m kg	3.30 m	1.22 m kg
D412-698-112 Cabin Door	0.82 lb	48.0 in	39.4 in lb	130 in	106.6 in lb
Roller Kits (net)	0.37 kg	1.22 m	0.45 m kg	3.30 m	1.22 m kg
Both D412-698-111/-112 Installed (net)	1.64 lb 0.74 kg	0 in 0 m	0 in lb 0 m kg	130 in 3.30 m	213.2 in lb 2.44 m kg
Replace 205-031-433-1 with D4737-043 (net)	0.19 lb 0.09 kg	-48.0 in -1.22 m	-9.1 in lb -0.11 m kg	168 in 4.27 m	31.9 in lb 0.38 m kg
Replace 205-031-433-2 with D4737-044 (net)	0.19 lb 0.09 kg	48.0 in 1.22 m	9.1 in lb 0.11 m kg	168 in 4.27 m	31.9 in lb 0.38 m kg
Replace 205-031-434-1 with D4737-041 (net)	0.12 lb 0.05 kg	+/-48.0 in +/-1.22 m	+/-5.8 in lb +/-0.06 m kg	168 in 4.27 m	20.2 in lb 0.21 m kg

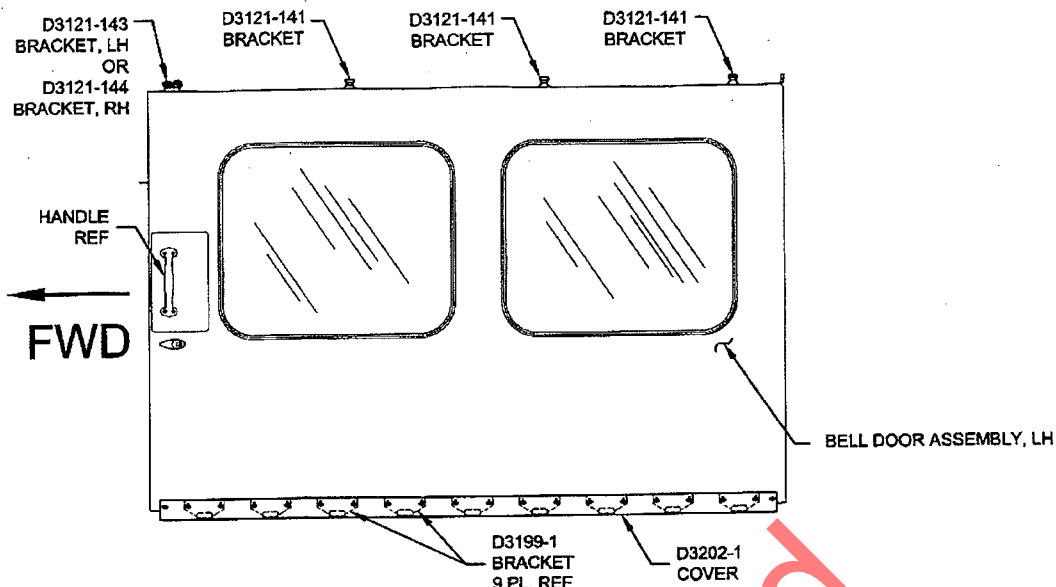
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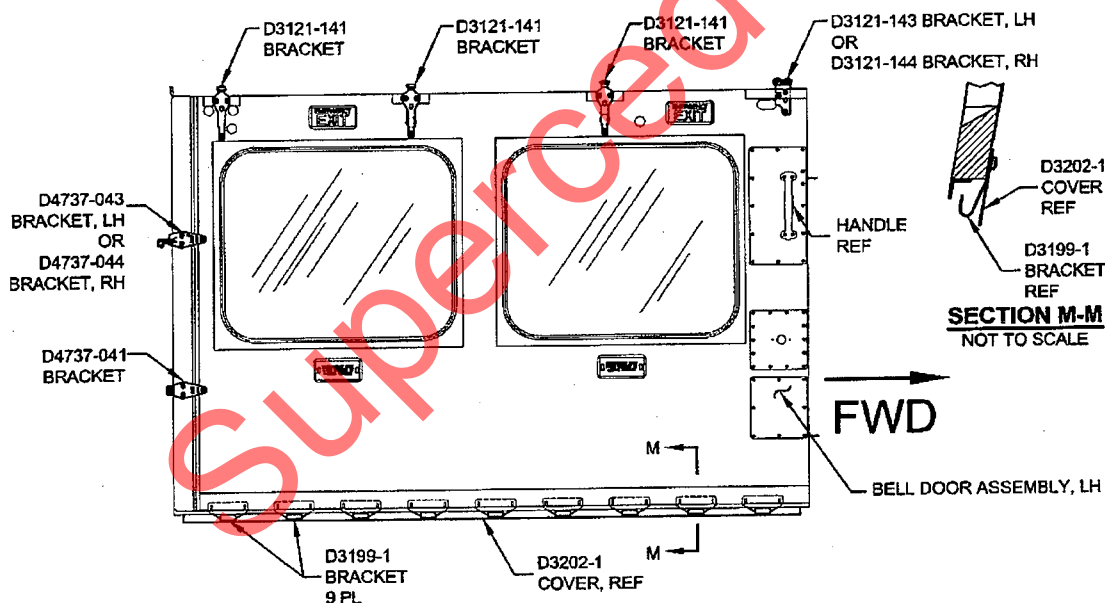
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OUTSIDE VIEW OF LH SLIDING DOOR (LOOKING INBOARD)
(RH DOOR OPPOSITE)






INSIDE VIEW OF LH SLIDING DOOR (LOOKING OUTBOARD)
(RH DOOR OPPOSITE)

FIGURE 2 - MODIFIED SLIDING DOOR
(D412-698-111 SHOWN, D412-698-112 OPPOSITE)

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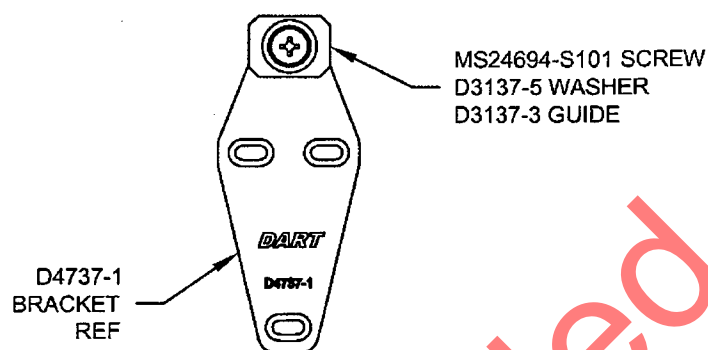
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5.0 MAINTENANCE

Maintain D412-698-111/-112 in accordance with ICA-D412-698 for the D412-698-011/-012 Kits.

6.0 D4737-041/-043/-044 REPLACEMENT PARTS

For D3121-141/-143/-144 Bracket Assemblies, see Section 5.0 of IIN-D412-698 (Section 52.14 of ICA-D412-698).



D4737-041 BRACKET ASSEMBLY



D4737-043/-044 BRACKET ASSEMBLY

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